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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,266	11/09/2005	Mitsuo Kuwabara	CSP-108-A	1130
21828 7590 01/13/2009 CARRIER BLACKMAN AND ASSOCIATES 24101 NOVI ROAD SUITE 100 NOVI, MI 48375			EXAMINER PARKER, FREDERICK JOHN	
			ART UNIT 1792	PAPER NUMBER
			NOTIFICATION DATE 01/13/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/523,266	Applicant(s) KUWABARA ET AL.	
	Examiner Frederick J. Parker	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-9 and 11-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-4,7,8 and 17-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/1/05;8/18/06;2/11/08;5/6/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 9,11-16 in the reply filed on 12-3-2008 is acknowledged.

Specification

2. The abstract of the disclosure is objected to because 1) the superfluous phrase "as an embodiment," which should be removed since it adds no meaning to the abstract and is confusing; 2) line 2, "from form" is a typo. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 16 is objected to because of the following informalities: it appears that on line 2, the word "metal" is missing after "one". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 15 is vague and indefinite because it is unclear how the base material can be coated with the second powder when the entire substrate is already coated by the first powder, as permitted on line 3.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 9,11-14,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cottone et al US 5549927.

Cottone teaches to coat substrates (citing metal substrates, without limitation, on col. 3,51; etc) with mixtures comprising a ceramic powder, metal brazing material, optionally a polymeric “binder”, and a flux; and thermally treating the coated substrates to form coatings. The binder is cited to include (poly)styrene which isn’t disclosed to be a reducing agent, but given the similarities of the process and claims would have inherently had the same function, per claim 11. Cottone further teaches temperatures to “activate the flux” to reduce or dissolve oxides on the substrate being coated or the powder being applied; thus Cottone discloses the flux to be a reducing agent in the coating mixture to reduce oxide contamination of the powder or substrate (col. 5, 6-10; col. 6, 65-67). Zinc metal and zinc or aluminum alloy powders are cited on col. 6,

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36-42, per claim 12; however metals are not limited, thereby permitting those of claim 16. The reference explicitly teaches a thermal treatment to cause reaction and formation of a coating; while “diffusion” per se is not cited, given the similarity of the scope of the claims and reference, it would have been apparent to one of ordinary skill that diffusion would have occurred given sufficient time. It is well-known that diffusion is a kinetic process, and that diffusion is ubiquitous in solids at elevated thermal conditions. Thus the degree and kinetics of diffusion is merely a matter of time at temperature, with diffusion varying due to a range of factors known in the art including but not limited to dislocations, defects, boundaries, etc. Thus the subject matter of claim 13 is inherent to the process of Cottone, with the specific degree of claim 9 an obvious variation, determinable by routine experimentation and/ or end-use application.

As to claim 14, since Cottone does disclose the need to prevent inclusion of oxides, the Examiner takes Official Notice that the use of an inert atmosphere to prevent the formation of additional oxides would have been a notoriously well-known and obvious modification not stated in Cottone.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the method of Cottone et al and perform the thermal process for a sufficient time to allow diffusion of an element/s from the coating into the substrate to provide a desired end property or adhesion because diffusion is ubiquitous in solids at elevated thermal conditions.

9. Claim 15 is objected to for depending from a rejected base claim; the prior art does not teach the specific plural coatings for the specific substrate cited in claim 15; however, claim 15 is rejected under 35 USC 112 above.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Frederick J. Parker
Primary Examiner
Art Unit 1792

/Frederick J. Parker/
Primary Examiner, Art Unit 1792